STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0016

JOHN ELIAS BALDACCI
GOVERNOR

DAVID A. COLE
COMMISSIONER

October 15, 2004
Subject: Kittery
Project No. IM-1031(500)E
PIN 10315.00
Bid Amendment No. 1

Dear Sir/Ms.:

Please make the following changes to your bid documents:

1. Table of contents

a. At Division 5- METALS---**DELETE---"NOT APPLICABLE"**
INSERT Section 05500 Metal Fabrications

b. At Division 7- THERMAL AND MOISTURE PROTECTION
INSERT Section 07210 Building Insulation
INSERT Section 07460 Vinyl Siding and Accessories
INSERT Section 07600 Flashing and Sheet Metal
INSERT Section 07901 Joint Sealants

c. At Division 9-FINISHES--- **DELETE---"NOT APPLICABLE"**
INSERT Section 09255 Gypsum Board Assemblies
INSERT Section 09511 Acoustical Panel Ceilings
INSERT Section 09650 Resilient Flooring
INSERT Section 09900 Painting

d. At Division 10- SPECIALTIES---**DELETE---"NOT APPLICABLE"**
INSERT Section 10800 Toilet and Bath Accessories

Make these changes in pen and ink.

2. Division 5 Metals

a. ADD the attached two pages, "Section 05500 Metal Fabrications"

3. Division 7 THERMAL AND MOISTURE PROTECTION

a. **ADD** the attached three pages "Section 07210 Building Insulation"
b. **ADD** the attached three pages "Section 07460 Vinyl Siding"
c. **ADD** the attached one page "Section 07600 Flashing and Sheet Metal"
d. **ADD** the attached three pages "Section 07901 Joint Sealants"

2. **Division 9 FINISHES**
    a. **ADD** the attached four pages "Section 09255 Gypsum Board Assemblies"
    b. **ADD** the attached three pages "Section 09511 Acoustical Panel Ceilings"
    c. **ADD** the attached four pages "Section 09650 Resilient Flooring"
    e. **ADD** the attached five pages "Section 09900 Painting"

5. **Division 10 SPECIALTIES**
    a. **ADD** the attached three pages "Section 10800 Toilet and Bath Accessories"
6. **Division 15**
    a. SECTION 15410 – PLUMBING FIXTURES Part 2 sub part 2.9 Individual Showers, paragraph (A) at the end of the paragraph in pen and ink **DELETE** "and shower rod with curtain."

Consider these changes prior to submitting your bid on October 27, 2004.

Sincerely,

Scott Bickford
Contracts & Specifications Engineer

SECTION 05500 - METAL FABRICATIONS

PART 1. - GENERAL

A. RELATED DOCUMENTS

1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to this Section.

B. SUMMARY

1. Work in this Section includes:
   a. Miscellaneous metal fasteners and components
   b. Pipe Handrails

C. SUBMITTALS

1. Submit manufacturer's qualification including similar previous work experience. Welder's certificate verifying AWS Qualifications within previous 12 months.
2. Submit shop drawings showing member sizes and configuration, construction details, hardware and fastenings, and installation procedure.

D. QUALITY ASSURANCE

1. References
   a. ASTM A36 - Structural steel
   b. ASTM A283 - Carbon Steel Plates, Shapes and Bars.
   c. ASTM A500 - Cold Formed Welded and Seamless Carbon Steel Structural Tubing in Round and Shapes.
   d. ASTM A501 - Hot Formed Welded and Seamless Carbon Steel Structural Tubing.
   e. AWS A2.0 - Standard Welding Symbols
   f. AWS D1.1 - Structural Welding Code
   g. SSPC - Steel Structures Painting Council.
2. Field Measurements
   a. Field verify dimensions before submitting shop drawings and fabrication begins.

PART 2. - PRODUCTS

A. MATERIALS

1. General:
   a. Metals shall be free from defects impairing strength, durability or appearance, and of best commercial quality for purposes specified. All metals shall be made of new materials.
   b. Metals shall be made with structural properties to sustain and safely withstand strains and stresses to which normally subjected, true to detail, clean, straight, with sharply defined profiles, curved work to true radii, and unless particularly noted, with smooth finished surfaces.
2. Steel - ASTM A-36
3. Steel Tubing - ASTM A-500, Grade B
4. Plates - ASTM A283
5. Pipe - ASTM A53, Grade B Schedule 40
6. Bolts, Nuts and Washers - ASTM A307 galvanized to ASTM A153 for galvanized components.
7. Welding Materials - AWS D1.1; type required for materials being welded.

B. FABRICATION

1. Fit and shop assemble in largest practical sections for delivery to site.
2. Fabricate items with joints tightly fitted and secured.
3. Continuously seal joined members by continuous welds. Welding shall be in strict accordance with AWS D1.1.
4. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush and hairline. Ease exposed edges to small uniform radius.
5. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
6. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabricated, except where specifically noted otherwise.
7. Pipe Handrails: 1-1/4" Std steel pipe, unless otherwise indicated, with flush welded connections and fittings. Posts shall be spaced, as indicated on Drawings, but in no case more than 4'-0" apart, measured horizontally along the run. Handrail posts shall be attached to framing by welding and placed into pipe sleeves embedded in concrete.
   a. Construct handrails to support 200 pound point load and 50 pound per linear foot applied in any direction.
   b. Wall brackets for Pipe Handrails: Julius Blum and Co., Inc. No. 306 cast malleable iron.
8. Shop paint - Gray "Combatit" metal primer, as made by Wilbur & Williams Co., "88 Gray metal Primer" by Tnemec Co. or approved equal.

C. Finishes

1. Clean surface of rust, scale, grease and foreign matter prior to finishing.
2. Prime paint items with one coat of primer.

PART 3. - EXECUTION

A. INSTALLATION

1. All work shall be fabricated, installed and erected square, plumb , straight, and true, accurately fitted and with tight joints and intersections. Work shall be accurately reinforced and anchored in place. Exposed work shall be finished smooth, with even, close joints and neat connection, unless otherwise indicated.
2. Bolts and Anchors: Provide bolts for fastening wood to metal work, concrete and masonry. Anchor bolts for fastening metalwork and wood to concrete and masonry shall be hooked at one end.
3. All work under this Section, except as otherwise specified, shall receive one coat shop primer before leaving shop.

END OF SECTION 05500

SECTION 07210 - BUILDING INSULATION

PART 1 - GENERAL

A. RELATED DOCUMENTS

1. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. SUMMARY

1. This Section includes the following:
   a. Fire-Safing insulation.
   b. Building insulation in batt form.
   c. Foundation and underslab insulation.
   d. Insulation accessories.
   e. Vapor barrier sheeting.
   f. Sound attenuation batt insulation.
   g. Inspection of insulation installation.

C. DELIVERY, STORAGE, AND HANDLING

1. Protect insulation materials from physical damage and from deterioration by moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's recommendations for handling, storage, and protection during installation.

PART 2 - PRODUCTS

A. MANUFACTURERS

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering insulation products that may be incorporated in the work include, but are not limited to, the following:
   a. Amoco.
   b. CertainTeed Corp.
   c. Dow Chemical.
   d. Knauf Fiber Glass GmbH.
   e. Johns Manville: Building Insulations Div., Manville Sales Corp.
   f. Owens/Corning Fiberglas Corp.
   g. U.C. Industries.

B. INSULATING MATERIALS

1. General: Provide insulating materials that comply with requirements and with referenced standards.
2. Unfaced Faced Mineral Fiber Blanket/Batt Insulation: Thermal insulation produced by combining mineral fibers of type described below with thermosetting resins to comply with ASTM C 665 for Type III and as follows:
   a. Mineral Fiber Type: Fibers manufactured from glass or slag.
   b. Surface Burning Characteristics: Maximum flame spread value of 10 and smoke developed value of 10.
   c. R-value: 3.17 per inch minimum.
3. Unfaced Faced Mineral Fiber Sound Attenuation Insulation: Sound attenuation insulation produced by combining mineral fibers with thermosetting resins.
4. Foundation insulation: Extruded polystyrene with a 25 psi minimum or greater compressive strength, in accordance with ASTM D 1621.
   a. Provide 2 inch thickness for all perimeter wall faces and underslab as detailed in Drawings.

b. Provide 1 inch thickness at perimeter of slab edge for thermal-break from exposed, uninsulated wall.

5. Glass Fiber Loose Fill Insulation: ASTM C 764 for Type 1 pneumatic application; maximum flame spread and smoke develop indices of 5.

6. Safing Insulation: USG Thermafiber mineral fireproofing insulation.

7. Sill Sealer: Amoco Amofoam or Dow polyethylene foam sill seal, full width of sill plate.

8. Insulation Baffles: Provide flanged, molded ABS or expanded polystyrene channel/baffles for attachment to trusses or underside of roof sheathing to provide air flow passage through insulation at eaves.

   a. Available Manufacturers: Subject to compliance with requirements, manufacturers offeing insulation baffle products that may be incorporated in the work include, but are not limited to, the following:
      (1) "Air Flash" baffles by Air Vent, Inc.
      (2) Prop-A-Vent polystyrene baffles.

9. Vapor Barrier Sheeting: 6 mil polyethylene film.

10. Vapor Barrier Joint Tape: Polyethylene self-adhesive tape, 2 inches wide.

PART 3 - EXECUTION

A. EXAMINATION

1. Examine substrates and conditions with Installer present, for compliance with requirements of the Sections in which substrates and related work are specified and to determine if other conditions affecting performance of insulation are satisfactory. Do not proceed with installation of insulation until unsatisfactory conditions have been corrected.

B. PREPARATION

1. Clean substrates of substances harmful to insulation or vapor retarders, including removal of projections that might puncture vapor barrier.

C. INSTALLATION, GENERAL

1. Comply with insulation manufacturer's instructions applicable to products and application indicated. If printed instructions are not available or do not apply to project conditions, consult manufacturer's technical representative for specific recommendations before proceeding with installation of insulation.

2. Install foundation perimeter insulation as indicated on the Drawings and as specified in Division 3.

   a. Protect below grade vertical insulation from damage during backfilling by applying protection board.
   b. Protect top surface of horizontal insulation from damage during concrete work by applying protection board.
   c. Install thermal-break insulation board at perimeter of slab edge just prior to pouring of slabs-on-grade.

3. Extend insulation full thickness as indicated to envelop entire area to be insulated. Cut and fit tightly around obstructions, and fill voids with insulation. Remove projections that interfere with placement.

4. Apply a single layer of insulation of required thickness, unless otherwise shown or required to make up total thickness. Run double layers perpendicular to each other wherever possible.

5. Install self-supported loose fill insulation according to manufacturer's recommendations. Do not install insulation until pipes, ducts, conduits, wiring and electrical devices have been installed, masked and inspected.

6. Install sound attenuation batt insulation where and as indicated on the Drawings.

7. Pack all voids around wires, pipes and boxes penetrating exterior wall system with loose insulation to insulate concealed cavities before installation of full cavity blankets.
    a. Verify clearances required from recessed electrical fixtures.
8. Apply vapor retarder to interior face of wall studs and underside of ceiling joists or rafters exposed to unconditioned spaces. Place vapor retarder over framing in largest practical sizes allowing as few joints or seams as possible. Laps shall be a minimum of 3 inches and be placed only at framing members.
    a. Tape all seams and perimeters of doors and window openings with polyethylene tape. If sheeting is damaged, replace damaged portion for full height of wall. Breaks, cuts or removal of vapor barrier during or resulting from drywall or trim installation is unacceptable. Repair before proceeding.

D. INSPECTION

1. Notify Architect when building is completely insulated and vapor barrier is installed to schedule inspection. Architect will inspect insulation installation for compliance with the specifications. Any areas of noncompliance will be noted in writing and the Contractor will correct prior to the continuation of construction. Do not cover any insulated surfaces prior to this inspection.

E. PROTECTION

1. General: Protect installed insulation and vapor barriers from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation will be subject to abuse and cannot be concealed and by permanent construction immediately after installation.

END OF SECTION 07210

SECTION 07460 – VINYL SIDING AND ACCESSORIES

PART 1 - GENERAL

A. RELATED DOCUMENTS

1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. SUMMARY

1. This Section includes the following:
   a. Vinyl clapboard siding, soffits, trim and accessories.
   b. Vinyl gutters.
   c. Louvers.
   d. Aluminum prefinished coil-stock for rake and fascia trim wrap.
2. Related work specified elsewhere in these specifications are as follows:
   a. Installation of joint sealers is specified in Section 07900.
   b. Installation of wind barrier is specified in Section 06100.

C. SUBMITTALS

1. General: Submit the following in accordance with Conditions of Contract and Division1 Specification Sections.
   a. Product data each type of product specified, including details of construction relative to materials, dimensions of individual components, profiles, textures, and colors.
   b. Samples for initial selection purposes in the form of manufacturer's sample finishes showing full range of colors, profiles and textures available.
   c. Samples for verification purposes in form of two full-size units of each type of siding, soffits, and accessory required.

D. QUALITY ASSURANCE

1. Single-Source Responsibility for Siding soffits, and Accessories: Obtain each color, grade, finish, type, and variety of siding and related accessories from a single source with resources to provide products of consistent quality in appearance and physical properties without delaying progress of the Work.

E. DELIVERY, STORAGE, AND HANDLING

1. Deliver materials to Project site in manufacturer's unopened bundles or containers with labels intact. Handle and store materials at Project site to prevent water damage, staining, or other physical damage. Comply with manufacturer's recommendations for job site storage, handling and protection.

F. PROJECT CONDITIONS

1. Weather Conditions: Proceed with siding installation only when existing and forecasted weather conditions will permit to be installed in compliance with manufacturer's recommendations and when substrate is completely dry.

G. WARRANTY

1. Special Project Warranty: Submit a written warranty, executed by manufacturer, agreeing to repair or replace siding that fails in materials or workmanship within the specified warranty period. Failures include, but are not limited to, deformation or deterioration of siding beyond normal weathering. This warranty shall be in addition to, and not a limitation of, other rights the Owner may have against the Contractor under the Contract Documents.
   a. Siding: Warranty period is 50 years after date of Substantial Completion.

PART 2 - PRODUCTS

A. MANUFACTURERS

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering siding and accessories which may be incorporated in the Work include, but are not limited to:
    a. Vinyl siding and trim: Selected from manufacturer's standard colors:
        (1) Alcoa: Mastic Corp.'s "Lake Forest Premier" series.
        (2) Alside: "Charter Oak Series" reinforced premium.
        (3) CertainTeed Corp., Vinyl Building Products Group: "Monogram Series".
        (4) Mid-America Building Products (Accessories only).
        (5) Wolverine Technologies, Inc.: "Restoration Classic".

B. VINYL CLAPBOARD SIDING

1. Formed Vinyl Siding: .044 minimum thickness, solid vinyl siding and accessories fabricated by extrusion from a polyvinyl chloride compound complying with ASTM D 3679, and as follows:
    a. Exposure: 8-inch exposure in double 4-inch style.
    b. Texture: As selected from manufacturer's full range of options
    c. Colors and Patterns: Where manufacturer's standard products are indicated, provide siding meeting the following requirements:
        (1) Provide selections made by Architect from manufacturer's full range of standard and custom colors for vinyl siding.
        (2) The Architect will choose up to three different colors of both trim and clapboards for the project. Trim and clapboards may be of differing colors on any part of the building.

C. VINYL SOFFITS

1. Supply both ventilating type and non-ventilating type soffit materials to achieve indicated patterns in locations shown on Drawings.

2. Perforated Venting Soffit Panels: Double 5 V-groove profile, 10 inches exposure, 5/8 inch depth; nominal 0.046 inch material thickness; nominal 12 feet piece length. Install with panel direction perpendicular to wall face.
    a. Nailing Hem: Single-row, with elongated nailing holes 1-1/4 inches long at 1-5/8 inches on center.
    b. Finish and Color: Low-gloss brushed texture. Color shall be white.
    a. Supply ventilating type soffit material having 1/8 inch diameter holes for not less than 15.72 square inches free air space per square foot of soffit area, minimum.

D. LOUVERS

1. High Performance louvers with fins configured to stop water and snow blow through as manufactured by Lomanco, Webb, or approved equal. Thermoplastic or polymer construction prefinished to match color as selected by Architect. Provide with features as follows:
    a. Integral nailing fin.
    b. Aluminum screening mesh to protect against insects.
    c. Flap valves that activate at high wind speeds that close off vent area or blade design to prevent weather penetration.
    d. Integral weep system.
    e. J-channel to accommodate siding.
    f. Color to be selected by Architect from manufacturer's full range.
2. Configuration as indicated: match roof pitch on triangular vent units.
3. Sizes and profiles as indicated on the Drawings:
    a. Louvers for exhaust fan vents to provide not less than minimum square footage of venting area indicated on Mechanical Drawings.

E. ACCESSORIES

1. Siding Accessories: Corner posts; window casings; starter strips; trim; beads, and other items as recommended by manufacturer for building configuration and siding system design. Colors shall be selected by Architect.

2. Siding blocks: All exterior wall penetrations will be mounted on siding blocks designed specifically for application including, but not limited to, exterior lights, receptacles, duct penetrations and sill cocks.

3. Fasteners: Noncorrosive aluminum siding nails, in sufficient length to penetrate minimum of 1 inch into substrate. Provide refinished fasteners in color to match siding where face nailing is unavoidable.

PART 3 - PRODUCTS

A. EXAMINATION

1. Examine substrates for compliance with requirements for substrates, installation tolerances, and other conditions affecting performance of siding. Do not proceed with installation until unsatisfactory conditions have been corrected.

B. PREPARATION

1. Clean substrates of projections and substances detrimental to application.

2. Coordinate installation with flashings and other adjoining construction to ensure proper sequencing.

C. INSTALLATION

1. Siding: Comply with siding manufacturer's installation instructions and recommendations. Center nails in elongated nailing slots without binding siding to allow for thermal movement. Installation shall be straight and true with no noticeable waving, warping or bowing of product. Vinyl siding shall look as much like real siding as possible. Install trim and accessories in accordance with manufacturer's recommendations. Overlap butt joints to shed water away from direction of prevailing wind. Isolate dissimilar metals.

2. Louvers: Coordinate installation with Mechanical Contractor for louvers used for exhaust fans.

3. Gutters: Install per manufacturer’s instructions with system components supplied and specified. Pitch toward outlets and downspouts or conductors to adequately drain as required and indicated.

D. ADJUSTING

1. Replace damaged materials with new materials complying with specified requirements.

E. CLEANING

1. Clean finished surfaces as recommended by manufacturer, and maintain in a clean condition during construction.

END OF SECTION 07460

SECTION 07600 - FLASHING AND SHEET METAL

PART 1 - GENERAL

A. RELATED DOCUMENTS

1. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work of this Section.

B. SUMMARY

1. This Section includes the following:
   a. Prefinished aluminum breakmetal wraps for wood trim and fascia.
   b. Miscellaneous sheet metal: Step flashing, miscellaneous roof flashing, head and sill flashing.
   c. Metal drip edge specified in Section 07311.

C. PROJECT CONDITIONS

1. Coordinate work of this section with interfacing and adjoining work for proper sequencing of each installation. Ensure best possible weather resistance and durability of work and protection of materials and finishes.

PART 2 - PRODUCTS

A. SHEET METAL FLASHING AND TRIM MATERIALS

1. Sheet Aluminum: Mill finish aluminum for all flashings. All aluminum coil-stock to be 0.032 inch thick, prefinished with baked enamel for application over wood trim and fasciae as a field-formed wrap, shaped to exact trim profile on metal-break. Manufacturer to be Alcoa or approved equal, color to be selected by Architect from manufacturer's full range.

2. Miscellaneous Materials and Accessories:
   a. Fasteners: Same metal as flashing/sheet metal or other non-corrosive metal as recommended by sheet manufacturer. Match finish of exposed heads with material being fastened.
   b. Metal Accessories: Provide sheet metal clips, straps, anchoring devices, and similar accessory units as required for installation of work, matching or compatible with material being installed, noncorrosive, size and gage required for performance.

PART 3 - EXECUTION

A. INSTALLATION REQUIREMENTS

1. General: Except as otherwise indicated, comply with manufacturer's installation instructions and recommendations and with SMACNA "Architectural Sheet Metal Manual." Anchor units of work securely in place by methods indicated, providing for thermal expansion of metal units; conceal fasteners where possible and set units true to line and level. Install work with laps, joints, and seams that will be permanently watertight and weatherproof.

2. Underlayment: Where stainless steel or aluminum is to be installed directly on cementitious or wood substrates, install a slip sheet of red rosin paper and a course of polyethylene underlayment.

3. Bed flanges of work in a thick coat of bituminous roofing cement where required for waterproof performance.

B. CLEANING AND PROTECTION

1. Clean exposed metal surfaces, removing substances that might cause corrosion of metal or deterioration of finishes.

2. Protection: Advise Contractor of required procedures for surveillance and protection of flashings and sheet metal work during construction to ensure that work will be without damage or deterioration other than natural weathering at time of Substantial Completion.

END OF SECTION 07600

SECTION 07901 - JOINT SEALANTS

PART 1 - GENERAL

A. RELATED DOCUMENTS

1. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. SUMMARY

1. This Section includes, but is not limited to, joint sealants for the following locations:
   a. Joints around window and door frames, and other openings in exterior and interior walls.
   b. Joints between dissimilar materials with emphasis on those experiencing differential movement.
   c. Joints between finished wall or floor and plumbing fixtures or countertops.

C. SYSTEM PERFORMANCE REQUIREMENTS

1. Provide elastomeric joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.

2. Provide joint sealants for interior applications that have been produced and installed to establish and maintain airtight continuous seals that are water-resistant and cause no staining or deterioration of joint substrates.

D. SUBMITTALS

1. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

2. Product data from manufacturers for each joint sealant product required.

3. Samples for selection purposes in form of manufacturer's standard bead samples, consisting of strips of actual products showing full range of colors available, for each product exposed to view.

4. Product test reports for each type of joint sealants indicated, evidencing compliance with requirements specified.

E. DELIVERY, STORAGE, AND HANDLING

1. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multicomponent materials.

2. Store and handle materials in compliance with manufacturer's recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

F. PROJECT CONDITIONS

1. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions:
   a. When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturer.

2. Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than allowed by joint sealant manufacturer for application indicated.

3. Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion of sealant are removed from joint substrates.

PART 2 - PRODUCTS

A. MATERIALS, GENERAL

1. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

2. Colors: Provide color selections made by Architect from manufacturer's full range of standard colors for products of type indicated, where color is not specified.

B. SEALANT MATERIALS

1. Available Products: Subject to compliance with requirements, sealants manufacturers include, but are not limited to:

   a. General Sealant: Low modulus, one component, moisture cured, non-sag, permanently flexible polyurethane sealant with 100 to 50 percent movement capabilities. Conforms to Fed. Spec. TT-S-00230C, Type II, Class A, ASTM C-920, Type S, Class 25, Grade NS,
      (1) Sika Sikaflex 1a.
      (2) Sonneborn Sonolastic NP1.

   b. Silicone Sealant: At kitchens, toilet and bath areas: 1 component mildew resistant white silicone sealant:
      (1) Dow Corning 786 Sealant.
      (2) General Electric Silicone Sanitary 1702 Sealant.
      (3) Rhodorsil 3B.

   c. Fire stopping sealant: One part silicone elastomer:
      (1) Dow Corning Fire Stop Sealant No. 2000, or approved equal.

   d. Latex Joint Sealant: For interior joints to be painted in vertical surfaces; single component, nonsag, mildew resistant, acrylic emulsion sealant in compliance with ASTM C 834, formulated to be paintable and recommended for exposed applications on interior:
      (1) Bostik Construction Products Div. Chem-Calk 600,
      (2) Pecora Corp AC-20,
      (3) Sonneborn Sonolac,
      (4) Tremco Acrylix Latex 834.

C. ACCESSORIES

1. Primer: As recommended by manufacturer.

2. Joint filler: As recommended by manufacturer.

3. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming in any way joint substrates and adjacent nonporous surfaces, and formulated to promote optimum adhesion of sealants with joint substrates.

4. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

A. EXAMINATION

1. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance. Do not proceed with installation of joint sealants until unsatisfactory conditions have been corrected.

B. PREPARATION

1. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with recommendations of joint sealant manufacturer and the following requirements:

a. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), oil, grease, waterproofing, water repellents, water, surface dirt, and frost.

b. Clean concrete, masonry and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.

2. Remove laitance and form release agents from concrete.

3. Clean metal, glass, plastic laminate and other nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

4. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealant manufacturer based on preconstruction joint sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's recommendations. Confine primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.

5. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

C. INSTALLATION OF JOINT SEALANTS

1. General: Comply with joint sealant manufacturer's printed installation instructions applicable to products and applications.

2. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

a. Do not leave gaps between ends of joint fillers. Do not stretch, twist, puncture, or tear joint fillers. Remove absorbent joint fillers that have become wet prior to sealant application and replace with dry material.

3. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability. Install sealants at the same time sealant backings are installed.

D. CLEANING

1. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur.

E. PROTECTION

1. Protect joint sealants during and after curing period so that they are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so that and installations with repaired areas are indistinguishable from original work.

END OF SECTION 07901

SECTION 09255 - GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

A. RELATED DOCUMENTS

1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. SUMMARY

1. This Section includes the following:
   a. Gypsum board assemblies attached to wood framing and furring members, including walls, ceilings and fire rated systems in both locations.
2. Related Sections: The following Sections contain requirements that relate to this Section:
   a. Section 06200 - Rough Carpentry.
   b. Section 09900 - Painting.

C. QUALITY ASSURANCE

1. Fire-Test-Response Characteristics: Where fire-rated gypsum board assemblies are indicated, provide materials and construction identical to those of assemblies tested for fire resistance per ASTM E119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
2. Fire Resistance Ratings: Design designations in UL "Fire Resistance Directory" or in the listing of another testing and inspecting agency acceptable to authorities having jurisdiction.

D. DELIVERY, STORAGE, AND HANDLING

1. Deliver materials in original packages, containers, or bundles bearing brand name and identification of manufacturer or supplier.
2. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes. Neatly stack gypsum panels flat to prevent sagging.
3. Handle gypsum board to prevent damage to edges, ends, and surfaces. Do not bend or otherwise damage metal corner beads and trim.

E. PROJECT CONDITIONS

1. Environmental Conditions, General: Establish and maintain environmental conditions for applying and finishing gypsum board to comply with ASTM C 840 and with gypsum board manufacturer's recommendations.
2. Room Temperatures: For non-adhesive attachment of gypsum board to framing, maintain not less than 40 deg F (4 deg C). For adhesive attachment and finishing of gypsum board, maintain not less than 50 deg F (10 deg C) for 48 hours prior to application and continuously thereafter until dry. Do not exceed 95 deg F (35 deg C) when using temporary heat sources.
3. Ventilation: Ventilate building spaces, as required, for drying joint treatment materials. Avoid drafts during hot dry weather to prevent finishing materials from drying too rapidly.

PART 2 - PRODUCTS

A. MANUFACTURERS

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
   a. Gypsum Board and Related Products:

(1) Domtqr Gypsum Inc.
(2) Gold Bond Building Products Div., National Gypsum Co.
(3) United States Gypsum Co.

B. GYPSUM BOARD PRODUCTS

1. General: Provide gypsum board of types indicated in maximum lengths available to minimize end-to-end butt joints.

2. Thickness: Provide gypsum board in 5/8 inch thickness throughout project unless otherwise indicated on Drawings.

3. Gypsum Wallboard: ASTM C 36 and of the following types:

a. Regular for vertical surfaces, unless otherwise indicated.
b. Type X where required for fire-resistive-rated assemblies.
c. Moisture Resistant (MR) wallboard as indicated.
(1) Long Edges: Tapered.

C. TRIM ACCESSORIES

1. Accessories for Interior Installation: Corner beads, edge trim, and control joints complying with ASTM C 1047 and requirements indicated below:

a. Material: Formed metal, or metal combined with paper. Plastic accessories may be used upon specific approval by Architect.
b. Shapes indicated below by reference to Fig. 1 designations in ASTM C 1047:
(1) Cornerbead on all outside corners, unless otherwise indicated.
(2) Tear away "L" and/or "J" bead on inside edge of window returns and at exposed edges of boards and wherever drywall abuts dissimilar materials whether indicated or not..

D. JOINT TREATMENT MATERIALS

1. General: Provide joint treatment materials complying with ASTM C 475 and the recommendations of both the manufacturers of sheet products and of joint treatment materials for each application indicated.

2. Joint Tape for Gypsum Board: Paper reinforcing tape manufactured by or approved by the wallboard manufacturer. Fiberglass mesh reinforcing tape may only be used upon acceptance by manufacturer and when used in conjunction with Setting-type joint compound.

3. Flex Tape: A combination of joint tape and metal strips laminated to form inside and outside corners. "Flex-Tape" shall be used on inside corners or wherever an oblique angle (less or more than 90 deg.) occurs. Setting-type joint compound equal to Durabond shall be used for all applications with "Flex-Tape."

4. All-purpose compound formulated for both taping and topping compounds as manufactured or approved by the wallboard manufacturer.

E. MISCELLANEOUS MATERIALS

1. General: Provide auxiliary materials for gypsum board construction that comply with referenced standards and recommendations of gypsum board manufacturer.

2. Metal Furring Channels: Size and shape as indicated on the Drawings.

3. Fasteners: ASTM 646, Type W, bugle-head Phillips screws for fastening gypsum board to wood members.

4. Sound Attenuation Batt Insulation: Owens Corning or approved equal. System intended for interior wall assembly with dimensional stability. Thickness as indicated.

PART 3 - EXECUTION

A. EXAMINATION

1. Examine areas and substrates to receive gypsum panels for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

B. APPLYING AND FINISHING GYPSUM BOARD, GENERAL

1. Gypsum Board Application and Finishing Standards: Install and finish gypsum panels to comply with ASTM C 840 and GA-216.

2. Install wall board panels to minimize the number of abutting end joints or avoid them entirely. Stagger abutting end joints not less than one framing member in alternate courses of board.

3. Install gypsum panels with face side out. Do not install imperfect, damaged, or damp panels. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.

4. Locate both edge or end joints over supports. Position adjoining panels so that tapered edges abut tapered edges, and field-cut edges abut field-cut edges and ends. Do not place tapered edges against cut edges or ends. Stagger vertical joints over different studs on opposite sides of partitions. Avoid joints at corners of framed openings where possible.

5. Attach gypsum panels to framing provided at openings and cutouts.

6. Fire Rated Assemblies: Maintain integrity of fire rated assemblies. Gypsum wall board to run continuously over studs, not interrupted by adjoining construction.

7. Do not attach gypsum panels across the flat grain of wide-dimension lumber including floor joists and headers. Instead, float gypsum panels over these members using strapping or provide control joints to counteract wood shrinkage.

8. Floating Construction: Where recommended by manufacturer, install gypsum panels over wood framing, with floating internal corner construction.

9. Space fasteners in gypsum panels according to referenced gypsum board application and finishing standard and manufacturer's recommendations.

C. GYPSUM BOARD APPLICATION METHODS

1. Install Sound Attenuation Batt Insulation where indicated and in accordance with recommendation of manufacturer before installing gypsum panels.

2. Single-Layer Application: Install gypsum wallboard panels as follows:
   a. On walls, apply gypsum panels horizontally (perpendicular to framing), unless otherwise indicated, and provide panel lengths that will minimize end joints.
   b. Install gypsum wallboard panels with tapered edges taped and finished to produce a flat surface.

3. Single-Layer Fastening Methods: Apply gypsum panels to supports as follows:
   a. Fasten with screws spaced per manufacturer’s recommendations.
   b. Install Fire Rated assemblies in strict accordance with U.L assembly requirements obtaining necessary indicated ratings.

4. Ceiling Installation: Install gypsum panels to supports as follows:
   a. Install first layer of gypsum panel directly to bottom of floor framing or roof trusses. Fire tape joints; finish Level 2.
   b. Install metal furring perpendicular to wood framing.
   c. Install second (finish) layer of gypsum panel directly to metal furring. Fire tape joints; finish Level 4.

5. Single-Layer Fastening Methods: Apply gypsum panels to supports as follows:
    a. Fasten with screws spaced per manufacturer's recommendations.
    b. Install Fire Rated assemblies in strict accordance with U.L assembly requirements obtaining necessary indicated ratings.

D. INSTALLING TRIM ACCESSORIES

1. General: For trim accessories with back flanges, fasten to framing with the same fasteners used to fasten gypsum board. Otherwise, fasten trim accessories according to accessory manufacturer's directions for type, length, and spacing of fasteners.
2. Install cornerbeads at all external corners.
3. Install edge trim where edge of gypsum panels would otherwise be exposed or semi-exposed. Provide edge trim type with face flange formed to receive joint compound..

E. FINISHING GYPSUM BOARD ASSEMBLIES

1. General: Apply joint treatment at gypsum board joints (both directions); flanges of corner bead, edge trim, and control joints; penetrations; fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration and levels of gypsum board finish indicated.
2. Prefill open joints, rounded or beveled edges, and damaged areas using setting-type joint compound.
3. Apply joint tape over gypsum board joints and to trim accessories with concealed face flanges as recommended by trim accessory manufacturer and as required to prevent cracks from developing in joint compound at flange edges.
4. Gypsum board finish:
    a. Level 2: All joints and interior angles to have tape embedded in joint compound and wiped with a joint knife leaving a thin coating of joint compound over all joints and interior angles. Fastener heads and accessories to be covered with a coat of joint compound. Tool marks acceptable. Tape per U. L. assembly requirements to meet indicated ratings.
        (1) Level 2 finish where gypsum panels are not exposed to view.
    b. Level 4: All joints and interior angles to have tape embedded in joint compound and two separate coats of joint compound applied over all flat joints and one separate coat of joint compound applied over interior angles. Fastener heads and accessories to be covered with three separate coats of joint compound. All joint compound to be smooth and free of tool marks and ridges. Tape per U. L. assembly requirements to meet indicated ratings.
        (1) Level 4 finish shall be provided wherever gypsum panels are normally exposed to view.

F. CLEANING AND PROTECTION

1. Promptly remove any residual joint compound from adjacent surfaces.
2. Promptly clean work area of dust, debris and extra material.
3. Provide final protection and maintain conditions that ensure gypsum board assemblies remain without damage or deterioration at time of Substantial Completion, in a manner suitable to Installer.

END OF SECTION 09255

SECTION 09511 - ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

A. RELATED DOCUMENTS

1. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. SUMMARY

1. This Section includes acoustical panel ceilings installed with exposed suspension systems where indicated in Drawings and as scheduled.

C. SUBMITTALS

1. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

2. Product data for each type of product specified.

3. Samples for selection purposes in form of manufacturer's samples consisting of actual acoustical units or sections of units showing full range of colors, textures, and patterns available for each type of unit indicated.

D. DELIVERY, STORAGE, AND HANDLING

1. Deliver acoustical ceiling units to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.

2. Before installing acoustical ceiling units, permit them to reach room temperature and stabilized moisture content.

3. Handle acoustical ceiling units carefully to avoid chipping edges or damaging units in any way.

E. PROJECT CONDITIONS

1. Do not install interior acoustical ceilings until space is enclosed and weatherproof, wet-work in space is completed and nominally dry, work above ceilings is complete, and ambient conditions of temperature and humidity will be continuously maintained at values near those indicated for final occupancy.

F. EXTRA MATERIALS

1. Deliver extra materials to Owner. Furnish extra materials described below that match products installed, are packaged with protective covering for storage, and are identified with appropriate labels.
   a. Acoustical Ceiling Units: Furnish one full carton of full-size units.

PART 2 - PRODUCTS

A. ACOUSTICAL LAY IN PANELS

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. Armstrong World Industries, Lancaster, PA.
   b. BPB Celotex, Tampa, FL
   c. Daiken Corporation, Osaka, Japan.
   d. USG Interiors, Inc., Chicago, IL
2. Materials: Basis-of-design; Provide the product specified or equivalent by one of the listed manufacturers.
   a. Ceilings:

(1) Acoustical Lay-in Ceiling Board: USG Interiors, Inc., Radar "Climaplus" or approved equal.
(2) Size: 24 inch x 24 inch x 3/4 inch thick, No. 2215.
(3) Composition: Wet formed mineral fiber
(4) Color: White
(5) Surface texture: Smooth, non-directional fissured.
(6) Edge: Square.
(7) NRC: Range: 0.55 – 0.65.
(8) Fire Hazard Classification: Standard.

B. METAL SUSPENSION SYSTEMS, GENERAL

1. Manufacturers:

a. Metal Suspension System: Hot-dip galvanized, heavy duty system; USG Interiors, Inc.'s "Donn DXL" or approved equal by Chicago Metallic or CBI USA, Inc.
(1) Size: 15/16" standard exposed face width for all tees and runners.
(2) Warrantee: Manufacturer's standard 10 year.
(3) Color: White.

PART 3 - EXECUTION

A. EXAMINATION

1. Examine substrates and structural framing to which ceiling system attaches or abuts, with Installer present, for compliance with requirements specified in this and other sections that affect installation and anchorage of ceiling system. Do not proceed with installation until unsatisfactory conditions have been corrected.

B. PREPARATION

1. Coordination: Furnish layouts for preset inserts, clips, and other ceiling anchors whose installation is specified in other sections.

2. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Generally avoid use of less-than-half-width units at borders, and comply with reflected ceiling plans.

C. INSTALLATION

1. General: Install acoustical ceiling systems to comply with installation standard referenced below, per manufacturer's instructions and CISCA "Ceiling Systems Handbook."

2. Standard for Installation of Ceiling Suspension Systems: Comply with ASTM C 636.

3. Suspend ceiling hangers from building structural members and as follows:

a. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or ceiling suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
b. Where width of ducts and other construction within ceiling plenum produces hanger spacing that interfere with the location of hangers at spacing required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.
c. Secure wire hangers by looping and wire-tying, either directly to structures or to inserts, eyescrews, or other devices that are secure and appropriate for substrate, and in a manner that will not cause them to deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
d. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eyescrews, or other devices that are secure and appropriate for structure to

which hangers are attached as well as for type of hanger involved, and in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.

e. Space hangers as recommended by manufacturer.

f. Install edge moldings of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical units.

(1) Sealant Bed: Apply continuous ribbon of acoustical sealant, concealed on back of vertical leg before installing moldings.

g. Screw-attach moldings to substrate at intervals not over 16 inches o.c. and not more than 3 inches from ends, leveling with ceiling suspension system to tolerance of 1/8 inch in 12'-0". Miter corners accurately and connect securely.

4. Install acoustical panels in coordination with suspension system, with edges concealed by support of suspension members. Scribe and cut panels to fit accurately at borders and at penetrations.

D. CLEANING

1. Clean exposed surfaces of acoustical ceilings, including trim, edge moldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch-up of minor finish damage. Remove and replace work that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

2. Provide final protection and maintain conditions that ensure ceiling assemblies remain without damage or deterioration at time of Substantial Completion, in a manner suitable to Installer.

END OF SECTION 09511

SECTION 09650 - RESILIENT FLOORING

PART 1 - GENERAL

A. SUMMARY

1. This Section includes the following:
   a. Vinyl composition floor tile.
   b. Vinyl Wall Base.
   c. Vinyl accessories including trim and transition strips.

B. RELATED SECTIONS

1. Division 3, Concrete.

C. SUBMITTALS

1. General: Submit samples for selection purposes in form of actual tiles or sections of tiles showing full range of colors and patterns available for each type of resilient floor tile indicated.

D. DELIVERY, STORAGE, AND HANDLING

1. Deliver tiles and installation accessories to Project site in original manufacturer's unopened cartons and containers each bearing names of product and manufacturer, Project identification, and shipping and handling instructions.
2. Store flooring materials in dry spaces protected from the weather with ambient temperatures maintained between 50 deg F (10 deg C) and 90 deg F (32 deg C).
3. Store tiles on flat surfaces. Move tiles and installation accessories into spaces where they will be installed at least 48 hours in advance of installation whenever possible.

E. PROJECT CONDITIONS

1. Maintain a minimum temperature of 70 deg F (21 deg C) in spaces to receive tiles for at least 48 hours prior to installation, during installation, and for not less than 48 hours after installation. After this period, maintain a temperature of not less than 55 deg F (13 deg C).
2. Do not install tiles until they are at the same temperature as the space where they are to be installed.
3. Close spaces to traffic during tile installation.

F. SEQUENCING AND SCHEDULING

1. Install tiles and accessories after other finishing operations, including ceiling replacement, have been completed.
2. Do not install tiles over concrete slabs until the slabs are sufficiently dry following abatement procedures to bond with adhesive as determined by tile manufacturer's recommended bond and moisture test.

G. COLORS

1. Architect will select from manufacturer’s standard colors.
   a. Flooring and Accessories: Architect will select up to three (3) colors for floor tiles and two (2) colors for accessories and trim, from manufacturer’s full range of colors.

H. EXTRA MATERIALS

1. Deliver extra materials to Owner. Furnish extra materials described below that match products installed, are packaged with protective covering for storage, and are identified with appropriate labels.
   a. Vinyl Composition Tile: Furnish quantity of full-size units equal to 2.0 percent of amount installed of each color and type of tile installed.

PART 2 - PRODUCTS

A. MANUFACTURERS AND MATERIALS

1. Vinyl Composition Tile: Tarkett, Expressions; Armstrong, Standard Excelon, Imperial Texture (1/8 inch gage); or equivalent series by Congoleum or Azrok.
   a. Conforming to FS SS-T-312, Type IV, Composition I; marbleized pattern; 12 x 12 inch size by 1/8" thick.
2. Vinyl Wall Base: Johnsonite, or approved equal.
   a. Coved with standard toe; 1/8 inch gauge; 4 inches high, matte finish.
   b. Prefabricated outside corners.
3. ACCESSORIES/ADHESIVES/SEALERS
   a. Subfloor Filler: Silpro Speedtop, acrylic modified cement based patching and leveling material, or approved equal. (Gypsum based products not acceptable).
   b. Primers and Adhesives: Waterproof; low VOC; of types recommended by resilient material manufacturer for specific material.
   c. Sealer and Wax: To match owners maintenance product line and as recommended by resilient flooring material manufacturer for material type and location. For the purposes of bidding, anticipate the use of the following:
      (1) Base coats (2 coats): Butcher's "Iron Stone."
      (2) Finish coats (per mfr's recommendations): Butchers "Benchmark."
   b. Edge guards and transitions: Extruded or molded heavy-duty vinyl of size and profile required and detailed. Accessories shall be two-piece where providing transition coverage from one type of finish flooring to another, with a minimum of 2-inch wide anchorage flange; provide items selected from manufacturer's full range of standard colors.

PART 3 - EXECUTION

A. EXAMINATION

1. General: Examine areas where installation will occur, with Installer present, to verify that substrates and conditions are satisfactory for tile installation and comply with tile manufacturer's requirements and those specified in this Section.
2. Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710 and the following:
   a. Slab substrates are dry and free of curing compounds, sealers, hardeners, and other materials whose presence would interfere with bonding of adhesive. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by tile manufacturer.
   b. Slabs are free of cracks, ridges, depressions, scale, and foreign deposits of any kind.
3. Walls: Verify that areas to receive vinyl base are smooth, free of voids, and comply with manufacturer's recommendations.
4. Do not proceed with installation until unsatisfactory conditions have been corrected.

B. PREPARATION

1. General: Comply with manufacturer's installation specifications to prepare substrates indicated to receive tile.
2. Use trowelable leveling and patching compound specified, per tile manufacturer's directions to fill cracks, holes, and depressions in substrates.
3. Broom or vacuum clean substrates to be covered by tiles immediately before tile installation, if necessary. Following cleaning, examine substrates for moisture, alkaline salts, carbonation, or dust.

4. Remove coatings, including curing compounds, and other substances that are incompatible with flooring adhesives and that contain soap, wax, oil, or silicone, by using a drum sander, or a polishing machine equipped with a heavy-duty wire brush.

5. Apply concrete slab primer, if recommended by flooring manufacturer, prior to applying adhesive. Apply according to manufacturer's directions.

C. INSTALLATION

1. Resilient Tile:
   a. General: Comply with tile manufacturer's installation directions and other requirements indicated that are applicable to each type of tile installation included in Project.
   b. Lay out tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths at perimeter that equal less than one-half of a tile. Install tiles square with room axis, unless otherwise indicated.
   c. Match tiles for color and pattern by selecting tiles from cartons in same sequence as manufactured and packaged, if so numbered. Cut tiles neatly around all fixtures. Discard broken, cracked, chipped, or deformed tiles.
   d. Lay tiles in basket weave pattern with grain direction alternating between, reversed in adjacent tiles.
   e. Scribe, cut, and fit tiles to butt tightly to vertical surfaces, permanent fixtures, built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings.
   f. Extend tiles into under Kitchen appliances, toe spaces, door reveals, closets, and similar openings.
   g. Extend tiles under Laundry appliances and counters.
   h. Maintain reference markers, holes, or openings that are in place or plainly marked for future cutting by repeating on finish flooring as marked on subfloor. Use chalk or other nonpermanent marking device.
   i. Adhere tiles to flooring substrates without producing open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, or other surface imperfections in completed tile installation.
   j. Use full spread of adhesive applied to substrate in compliance with tile manufacturer's directions including those for trowel notching, adhesive mixing, and adhesive open and working times.
2. Base:
   a. Fit joints tight and vertical. Maintain minimum measurement of 18 inches between joints.
   b. Miter internal corners. Wrap outside corners with joints no closer than 12 inches from corner. Where not feasible to apply around corners use corner pieces.
   c. Install base on solid backing. Adhere tightly to wall and floor surfaces. Exercise extreme care to apply adhesive over entire area and up to top edge, but not on the wall or floor areas not covered by base.
   d. Scribe and fit to door frames and other obstructions.
   e. Install straight and level to variation of plus or minus 1/8 inch over 10 feet.

I. CLEANING AND PROTECTION

1. Perform the following operations immediately after completing installation:
   a. Remove visible adhesive and other surface blemishes using cleaner recommended by tile manufacturers.
   b. Sweep or vacuum floor thoroughly.
   c. Do not wash floor until after time period recommended by resilient floor tile manufacturer.
   d. Damp-mop tile to remove black marks and soil.
   e. Protect flooring against mars, marks, indentations, and other damage during remainder of installation period. Use protection methods indicated or recommended by tile manufacturer.

2. Do not move heavy and sharp objects directly over tiles. Place plywood or hardboard panels over tiles and under objects while they are being moved. Slide or roll objects over panels without moving panels.

3. Resilient Tile:
    a. Seal tiles with 2 coats of specified sealer not less than 4 days prior to dates scheduled for inspections intended to establish date of Substantial Completion in each area of Project.
    b. Top coat and burnish floor tile with specified product, applied as recommended by manufacturer, immediately after sealer has reached adequate cure/dryness.

END OF SECTION 09650

SECTION 09900 - PAINTING

PART 1 - GENERAL

A. RELATED DOCUMENTS

1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. SUMMARY

1. This Section includes the following: surface preparation, painting, and finishing of exposed items and surfaces.
    a. Surface preparation, priming, and finish coats specified in this Section are in addition to shop-priming and surface treatment specified under other Sections.
    b. Paint exposed surfaces, except where a surface or material is specifically indicated not to be painted or is to remain natural. Where an item or surface is not specifically mentioned, paint the same as similar adjacent materials or surfaces. If color or finish is not designated, the Architect will select from standard colors or finishes available.
    c. Painting is not required on prefinished items including cabinetry as specified as prefinished, concealed surfaces; operating parts; and labels.
    d. Prime and backprime all exterior wood trim and finish work and all wood trim and finish work to be wrapped with prefinished breakmetal.
2. Labels: Do not paint over Underwriters Laboratories, Factory Mutual or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.
3. Related Work specified elsewhere in this Project Manual includes:
    a. Section 06200 - Finish Carpentry.
    b. Section 09270 - Gypsum Board Assemblies.

C. SUBMITTALS

1. General: Submit the following according to Conditions of the Contract and Division 1 Specification Sections.
2. Product data for each paint system specified including primers.
    a. Provide the manufacturer's technical information including label analysis and instructions for handling, storage, and application of each material proposed for use.
    b. List each material and cross-reference the specific coating, finish system, and application. Identify each material by the manufacturer's catalog number and general classification.
3. Samples for color selection in the form of manufacturer's color charts.

D. QUALITY ASSURANCE

1. Single-Source Responsibility: Provide primers and undercoat paint produced by the same manufacturer as the finish coats.

E. DELIVERY, STORAGE, AND HANDLING

1. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain containers used in storage in a clean condition, free of foreign materials and residue.

F. JOB CONDITIONS

1. Apply paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 deg F (10 deg C) and 90 deg F (32 deg C).

2. Do not apply paint when the relative humidity exceeds 85 percent; or at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

G. EXTRA MATERIAL

1. Provide a minimum of one gallon of each color of finish paint for every ten gallons used to complete the work.

PART 2 - PRODUCTS

A. PAINT MATERIALS, GENERAL

1. Material Compatibility: Provide primers, finish coat materials, and related materials that are compatible with one another, existing conditions and the substrates indicated under conditions of service and application, as demonstrated by the manufacturer based on testing and field experience. Contractor is responsible for the verification of existing substrates in the field prior to ordering material.

2. Material Quality: Provide the manufacturer's best-quality trade sale paint material of the various coating types specified. Paint material containers not displaying manufacturer's product identification will not be acceptable.

   a. Colors: Provide color selections made by the Architect from the manufacturer's full range of standard and deep hue colors. Architect will select up to three different wall colors, and three different trim colors. Corridor walls will receive two different colors.

B. PRODUCTS

1. Number of coats listed is a minimum, apply additional coats if undercoats, stains, or other conditions show through final coat of paint until paint film is of uniform finish, color, and appearance**.**

2. Manufacturer: Subject to compliance with requirements, provide products of one of the listed Manufacturers.

   a. Benjamin Moore (BM)
   b. California
   c. ICI (Including all represented brands)
   d. Pratt & Lambert (PL)
   e. Sherwin Williams (SW)
   f. Where only one manufacturer is indicated, products by the other listed manufacturers that meet the performance characteristics of the listed product will be acceptable.

3. Exterior Painting:

   a. Exterior Ferrous Metal: Gloss enamel finish: two coats over primer with total dry film thickness not less than 2.5 mils. Primer is not required on shop primed items.
      (1) Synthetic rust-inhibiting Primer:
         (a) ICI/Devoe: Devshield 4130, Metal Primer.
         (b) BM: IronClad Retardo Rust-Inhibitive Paint #163.
         (c) SW: Kem Kromik Universal Metal Primer, Series B50.
         (d) Color: Use a primer color that is compatible with finish color.
      (2) Gloss alkyd enamel:
         (a) ICI/Devoe: Devshield 4328 Interior/Exterior Alkyd-Urethane Gloss Enamel.
         (b) BM: Impervo High-Gloss Enamel #133.
         (c) SW: Industrial Enamel, Series B54.
   b. Exterior Painted Wood Trim: Alkyd based exterior paint: primer as needed for unprimed surfaces only, and 2 coats of finish paint.
      (1) Primer:
         (a) SW: A-100 Exterior Wood Primer, 2.2.mils dry.

      (2) Paint:

(a) SW: SWP Exterior gloss, oil-base paint, Series A2.

4. Interior Painting:
   a. Interior - Painted Ferrous Metal: Acrylic enamel, two coats over primer after surface preparation as recommended by manufacturer.
      (1) Primer Coat; metal primer:
         (a) ICI/Devoe: Devflex 4020, acrylic Metal Primer, white.
         (b) SW: DTM Acrylic primer/finish
      (2) Interior, semigloss, odorless, acrylic enamel:
         (a) ICI/Devoe: Devflex 4206, Semi-gloss acrylic enamel.
         (b) SW: ProClassic Waterborne Semi-gloss.
   b. Interior Painted Woodwork - Semigloss Enamel Finish: two coats over primer.
      (1) Interior undercoat.
         (a) ICI: Ultra-Hide Aquacrylic GRIPPER, acrylic primer-sealer.
         (b) BM: Moore's Alkyd Enamel Underbody #217.
         (c) PL: Interior Trim Primer.
      (2) Interior, semigloss, odorless, alkyd enamel second and third coats.
         (a) ICI: Ultra-Hide Alkyd Semi-gloss Enamel.
         (b) BM: Moore's Satin Impervo Enamel #235.
         (c) PL: Cellu-Tone Alkyd Satin Enamel.
   c. Painted Wallboard, - Low lustre, latex-based, two coats over primer.
      (1) Primer Coat; Neutral color primer-sealer:
         (a) ICI: Ultra-Hide, 1030 PVA Latex general purpose primer.
         (b) BM: Moore's Latex Quick-Dry Prime Seal #201.
         (c) PL: Latex Wall Primer Z30001.
      (2) Finish Coats: Latex Semi-Gloss at walls, Flat finish at ceilings.
         (a) ICI: Ultra-Hide, 1414 Latex low-lustre enamel wall paint.
         (b) BM: Moore's Regal Aquaglo #333.
         (c) PL: Accolade Interior Semi-gloss Latex.

PART 3 - EXECUTION

A. EXAMINATION

1. Examine substrates and conditions under which painting will be performed for compliance with paint application requirements. Surfaces receiving paint must be thoroughly dry before paint is applied.
   a. All surfaces to receive paint to be smooth and free of any defects. All nails and screws, and any dents, tool marks or blemishes to be filled and sanded smooth. All welds to be ground smooth.
   b. Do not begin to apply paint until unsatisfactory conditions have been corrected. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.
2. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers. Notify the Architect about anticipated problems using the materials specified over substrates primed by others.

B. PREPARATION

1. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted, or provide surface-applied protection prior to surface preparation and painting. Remove these items, if necessary, to completely paint the items and adjacent surfaces. Following completion of painting operations in each space or area, have items reinstalled by workers skilled in the trades involved.
2. Cleaning: Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various coatings. Remove oil and grease prior to cleaning.

a. Surface Preparation: Clean and prepare surfaces to be painted according to the manufacturer's instructions for each particular substrate condition and as specified. Provide barrier coats over incompatible primers or remove and reprime. Notify Owner in writing about anticipated problems using the specified finish-coat material with substrates primed by others.

3. Ferrous Metals: Clean ungalvanized ferrous metal surfaces that have not been shop primed; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with recommendations of the Steel Structures Painting Council (SSPC).
   a. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by the paint manufacturer, and touch up with the same primer as the shop coat.
4. Materials Preparation: Carefully mix and prepare paint materials according to manufacturer's directions.
   a. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
   b. Stir material before application to produce a mixture of uniform density; stir as required during application. Do not stir surface film that forms into material. Remove any film and, if necessary, strain material before using.
   c. Use only thinners approved by the paint manufacturer and only within recommended limits.

C. APPLICATION

1. General: Apply paint according to manufacturer's directions and recommendations. Use applicators and techniques best suited for substrate and type of material being applied.
2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film. Provide finish coats that are compatible with primers used.
3. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer.
4. Give special attention to ensure that surfaces, including edges, corners, crevices, welds, and exposed fasteners, receive a dry film thickness equivalent to that of flat surfaces.
5. Sand lightly between each succeeding enamel coat.
6. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
   a. Do not re-coat until previous coat has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where application of another coat of paint does not cause the undercoat to lift or lose adhesion.
7. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to the manufacturer's directions.
   a. Brushes: Use brushes best suited for the material applied.
   b. Rollers: Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by the manufacturer for the material and texture required.
   c. Spray Equipment: Use airless spray equipment with orifice size as recommended by the manufacturer for the material and texture required.
8. Minimum Coating Thickness: Apply materials no thinner than the manufacturer's recommended spreading rate.
9. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by the manufacturer, to material that is required to be painted or finished and that has not been prime-coated by others. Re-coat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.

10. Pigmented (Opaque) Finishes: Completely cover to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

D. CLEANING

1. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

2. After paint has thoroughly dried, reinstall trim items and components removed to facilitate finishing operations.

E. PROTECTION

1. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Owner.

2. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

END OF SECTION 09900

SECTION 10800 - TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

A. RELATED DOCUMENTS

1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. SUMMARY

1. This Section includes toilet and bath accessories.
2. Coordinate locations of solid wood blocking for accessories.

C. SUBMITTALS

1. Product data for each toilet accessory item specified, including construction details relative to materials, dimensions, gages, profiles, mounting method, specified options, and finishes.
2. Maintenance instructions, including replaceable parts, and service recommendations.

D. QUALITY ASSURANCE

1. Inserts and Anchorages: Furnish accessory manufacturers' standard inserts and anchoring devices that must be set in concrete or built into masonry. Coordinate delivery with other work to avoid delay.
2. Single-Source Responsibility: Provide products of same manufacturer for each type of accessory unit and for units exposed to view in same areas, unless otherwise acceptable to Architect.

E. WARRANTY

1. Warranty: Submit a written warranty executed by mirror manufacturer, agreeing to replace any mirrors that develop visible silver spoilage defects within warranty period.
2. Warranty Period: 15 years from date of Substantial Completion.
3. The warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.

PART 2 - PRODUCTS

A. ACCEPTABLE MANUFACTURERS

1. Manufacturers: Subject to compliance with requirements, provide toilet accessories in series or style as scheduled on the Drawings or by one of the following:
   a. Public Toilet Rooms:
      (1) Bobrick, or approved equal.

B. MATERIALS, GENERAL

1. Stainless Steel: AISI Type 302/304, with polished No. 4 finish, 0.034-inch (22-gage) minimum thickness.
2. Brass: Leaded and unleaded, flat products, ASTM B 19; rods, shapes, forgings, and flat products with finished edges, ASTM B 16; Castings, ASTM B 30.
3. Sheet Steel: Cold-rolled, commercial quality ASTM A 366, 0.04-inch (20-gage) minimum. Surface preparation and metal pretreatment as required for applied finish.
4. Galvanized Steel Sheet: ASTM A 527, G60.

5. Chromium Plating: Nickel and chromium electro-deposited on base metal, ASTM B 456, Type SC 2.

6. Baked Enamel Finish: Factory-applied, gloss white, baked acrylic enamel coating.

7. Mirror Glass: Nominal 6.0-mm (0.23-inch) thick, conforming to ASTM C 1036, Type I, Class 1, Quality q2, and with silvering, electroplated- plated copper coating, and protective organic coating Lifetime warranted against silver spoilage.

8. Galvanized Steel Mounting Devices: ASTM A 153, hot-dip galvanized after fabrication.

9. Fasteners: Screws, bolts, and other devices of the same material as accessory unit, or of galvanized steel where concealed.

C. ACCESSORIES:

1. Toilet Tissue Dispenser: Bobrick B-5288, Matrix series.

2. Paper Towel Dispenser: Bobrick B-5262, Matrix series.

3. Mirror: Bobrick B-165 Series, 1836 size.

4. Wall Mounted Soap Dis penser: Bobrick B5050, Matrix series.

5. Grab Bars: Stainless steel bars with peened grip area, meeting all accessibility requirements. Provide 36" and 42" lengths where indicated on Drawings. Mounting plate and fasteners shall be concealed with cover escutcheon secured with set screws.

6. Robe Hook: Heavy-duty satin finished stainless steel double-prong robe hook; rectangular wall bracket with backplate for concealed mounting. Install on back of each restroom door.

7. Shower Curtain Rod: At Staff Shower; provide stainless-steel shower curtain rod with 3-inch stainless-steel flanges designed for exposed fasteners, in length required for shower opening indicated, and complying with the following:
   a. Heavy-Duty Rod: 1-1/4-inch OD; fabricated from nominal 0.05-inch- thick stainless steel.

8. Shower Curtain: At Staff Shower; provide shower curtain complying with the following:
   a. Antibacterial Shower Curtain: Minimum 10-oz. , nylon-reinforced vinyl or 0.008-inch- thick vinyl material with integral antibacterial agent and corrosion-resistant grommets at minimum 6 inches o.c. through top hem.
   b. Size: Minimum 6 inches wider than opening by 72 inches high.
   c. Color: As selected by Designer from mfr's full range.

9. Shower Curtain Hooks: Chrome-plated or stainless steel, spring wire curtain hooks with snap fasteners, sized to accommodate specified curtain rod. Provide one hook per curtain grommet.

D. FABRICATION

1. General: No names or labels are permitted on exposed faces of toilet and bath accessory units. On either interior surface not exposed to view or on back surface, provide identification of each accessory item either by a printed, waterproof label or a stamped nameplate indicating manufacturer's name and product model number.

2. Surface-Mounted Toilet Accessories, General: Except where otherwise indicated, fabricate units with tight seams and joints, exposed edges rolled. Provide concealed anchorage wherever possible.

PART 3 - EXECUTION

A. INSTALLATION

1. Install toilet accessory units according to manufacturers' instructions, using fasteners appropriate to substrate as recommended by unit manufacturer. Install units plumb and level, firmly anchored in locations and at heights indicated.

2. Mounting heights shall be as shown and in accordance with ADA where applicable.

B. ADJUSTING AND CLEANING

1. Adjust toilet accessories for proper operation and verify that mechanisms function smoothly. Replace damaged or defective items.

2. Clean and polish all exposed surfaces strictly according to manufacturer's recommendations after removing temporary labels and protective coatings.

END OF SECTION 10800